

BASIS FOR THE AMENDMENT

Claims 1 and 3-9 have been amended.

Claims 10-28 have been added.

The amendment of Claims 1, 3-4, and 6-9 are supported by the corresponding claims as originally filed. The amendment of Claim 5 is supported by original Claim 5 as filed. New Claims 10 and 11 are supported by original Claims 3 and 4, respectively. New Claims 12-17 are supported by the Examples of the present specification. New Claims 18-20 are supported by original Claims 7-9, respectively. New Claim 21 is supported by the Examples and page 55, line 9 to page 57, line 17. New Claim 22 is supported by original Claim 6. New Claims 23-25 are supported by the Examples of the present specification. New Claims 26-28 are supported by the Examples, as well as original Claims 7-9, respectively.

No new matter is believed to have been entered by virtue of the present amendment.

REMARKS

Claims 1-28 are pending in the present application.

Applicants wish to thank Examiner Robertson for the helpful and courteous discussion with their undersigned Representative on October 9, 2002, and for correcting the deficiencies in form in the Information Disclosure Statements filed on July 9, 2001 and June 10, 2002.

The rejection of Claims 5 and 6 under 35 U.S.C. §102(a) over Takahama et al (EP 0,989,166 A1) is obviated by amendment.

The present invention provides, in part, a method for producing a coating composition which comprises hydrolyzing and/or condensing an organosilane polymer represented by the following general formula (1) and an organosiloxane oligomer having a weight average molecular weight of 300 to 100,000, in the presence of an aqueous dispersion of a

photocatalyst having a pH of 3 to 9 and an organic solvent in which the content of an organic solvent having a surface tension at 20°C of more than 260 $\mu\text{N}/\text{cm}$ is 20% by weight or less based on the whole organic solvent (see Claim 5).

The present invention also provides, in part, a method for producing a coating composition which comprises hydrolyzing and/or condensing an organosilane polymer represented by the following general formula (1) and an organosiloxane oligomer having a weight average molecular weight of 300 to 100,000, in the presence of an aqueous dispersion of a photocatalyst having a pH of 3 to 9 and an organic solvent in which the content of an organic solvent having a surface tension at 20°C of more than 260 $\mu\text{N}/\text{cm}$ is 20% by weight or less based on the whole organic solvent, and subsequently adding a polymer containing a silyl group having a silicon atom bound to a hydrolytic group and/or a hydroxyl group (see Claim 21).

Applicants submit that Takahama et al do not disclose or suggest any method in which (a) an organosilane polymer represented by the following general formula (1) and (b) an organosiloxane oligomer having a weight average molecular weight of 300 to 100,000 are both hydrolyzed and/or condensed. The standard for determining anticipation requires that the reference “must teach every element of the claim” (MPEP §2131). Therefore, the absence of any disclosure by Takahama et al of the presently claimed method would necessarily make this reference fail to anticipate the present invention.

The present inventive method, which calls for first hydrolyzing and condensing (a) and (b) in the presence of (c') and component (d'), results in good compatibility with component (e) (page 56, lines 5-13). By virtue of the present inventive method, it is now possible to hydrolyze/condense component (a), component (b), and component (e) in the presence of component (c) and component (d') (page 56, lines 13-16). Moreover, the present inventive method provides vastly improved dispersion stability in an organic solvent low in

surface tension, enhanced storage stability, reduction in the cissing phenomenon on an undercoat layer and a substrate, and improvements in the film-forming properties (page 56, lines 17-23 and Examples). Applicants submit that Takahama et al do not suggest any of these advantage that flow from the present invention.

Citing In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974), MPEP §2143.03 states: "To establish a *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." Applicants submit that the disclosure of Takahama et al fails to meet this requirement, and as such the artisan would have no reasonable motivation to envision and/or perform the method of the present invention or any reasonable expectation of the advantageous obtained thereby.

Accordingly, Applicants respectfully request withdrawal of this ground of rejection.

The rejection of Claims 1-3, 5 and 6 under 35 U.S.C. §102(a) over Kanamori et al (EP 1,002,318 A2) is traversed.

Applicants submit certified English translations of the foreign priority documents: Japanese Patent Application No. 2000-112290, which was filed on April 13, 2000, and Japanese Patent Application No. 2000-112291, which was filed on April 13, 2000.

Accordingly, Applicants request that the Office acknowledge the priority date of the present application based on this priority document.

Kanamori et al was published on July 26, 2000, which is over three months after the priority date of the present application, and as such is not available as prior art under 35 U.S.C. §102(a). Accordingly, Applicants request withdrawal of this ground of rejection.

The objection of Claims 4 and 7-9 under 37 C.F.R. §1.75(c) and the rejection of Claims 1-3, 5, and 6 under 35 U.S.C. §112, second paragraph, are obviated by amendment. Withdrawal of this objection and of this ground of rejection is requested.

Applicants submit that the application is now in condition for allowance, and early notification of such action is earnestly solicited.

Respectfully submitted,

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IN THE CLAIMS

Please amend the claims as follows:

1. (Amended) A coating composition comprising:

(a) at least one component selected from the group consisting of an organosilane represented by the following general formula (1), a hydrolyzate of said organosilane and a condensates of said organosilane;

(b) an organosiloxane oligomer having [an SiO bond and] a weight average molecular weight of 300 to 100,000;

(c) a photocatalyst; and

[(d-1)] (d') an organic solvent having a surface tension at 20°C of 260 μ N/cm or less:

$(R^1)_nSi(OR^2)_{4-n}$ (1)

wherein, R^1 , which may be the same or different when two or more R^1 groups are present, represents a monovalent organic group having 1 to 10 carbon atoms; R^2 , which may be the same or different when two or more R^2 groups are present, represents an alkyl group having 1 to 5 carbon atoms or an aryl group having 1 to 6 carbon atoms; and n is an integer ranging from 0 to 2.--

--3. (Amended) The coating composition according to claim 1 [or 2], wherein said component (a) is

(a-1) at least one component selected from the group consisting of an organosilane represented by general formula (1) [(]wherein n is 1 or 2, and at least one of R^1 groups is an

epoxy group-containing substituted derivative[)], a hydrolyzate of said organosilane and a condensate of said organosilane; and

(a-2) at least one component selected from the group consisting of an organosilane represented by general formula (1) [(]wherein no epoxy group is contained in R¹[)], a hydrolyzate of said organosilane and a condensate of said organosilane.

4. (Amended) The coating composition according to [any one of claims 1 to 3] claim 1, wherein said component (b) has a group represented by general formula - (RO) p- (R' O)q- R" [(]wherein R and R', which may be the same or different, represent alkyl groups each having 1 to 5 carbon atoms, R" represents a hydrogen atom or an alkyl group having 1 to 5 carbon atoms, and p+q is from 2 to 30[)], and a silyl group having a silicon atom bound to a hydrolytic group and/or a hydroxyl group.

5. (Amended) A method for producing a coating composition which comprises hydrolyzing and/or condensing [at least one selected from the group consisting of]:

(a) an organosilane represented by the following general formula (1); and
(b) an organosiloxane oligomer having [an SiO bond and] a weight average molecular weight of 300 to 100,000; [and
(e) a polymer containing a silyl group having a silicon atom bound to a hydrolytic group and/or a hydroxyl group,]

in the presence of (c') an aqueous dispersion of a photocatalyst having a pH of 3 to 9 and (d') an organic solvent in which the content of an organic solvent having a surface tension at 20°C of more than 260 μ N/cm is 20% by weight or less based on the whole organic solvent:



wherein, R¹, which maybe the same or different when two or more R¹ groups are present, represents a monovalent organic group having 1 to 10 carbon atoms; R², which may be the

same or different when two or more R² groups are present, represents an alkyl group having 1 to 5 carbon atoms or an aryl group having 1 to 6 carbon atoms; and n is an integer ranging from 0 to 2.

6. (Amended) The method according to claim 5, wherein said component (a) is

(a-1) at least one component selected from the group consisting of an organosilane represented by general formula (1) [(]wherein n is 1 or 2, and at least one of R¹ groups is an epoxy group-containing substituted derivative[)], a hydrolyzate of said organosilane and a condensate of said organosilane; or

(a-2) at least one component selected from the group consisting of an organosilane represented by general formula (1) [(]wherein no epoxy group is contained in R¹[)], a hydrolyzate of said organosilane and a condensate of said organosilane.

7. (Amended) A cured product obtained by coating and drying [the] a coating composition [according to any one of claims 1 to 4] comprising:

(a) at least one component selected from the group consisting of an organosilane represented by the following general formula (1), a hydrolyzate of said organosilane and a condensates of said organosilane;

(b) an organosiloxane oligomer having [an SiO bond and] a weight average molecular weight of 300 to 100,000;

(c) a photocatalyst; and

(d') an organic solvent having a surface tension at 20°C of 260 µN/cm or less:

(R¹)_nSi(OR²)_{4-n} (1)

wherein, R¹, which may be the same or different when two or more R¹ groups are present, represents a monovalent organic group having 1 to 10 carbon atoms; R², which may be the same or different when two or more R² groups are present, represents an alkyl group having 1 to 5 carbon atoms or an aryl group having 1 to 6 carbon atoms; and n is an integer

ranging from 0 to 2 [, or the composition obtained by the method according to claim 5 or 6].

8. (Amended) A cured product having a dry coating layer comprising anyone of the following undercoating compositions (i) to (iv), and having thereon a dry coating layer comprising the coating composition according to [any one of claims 1 to 4, or the coating composition obtained by the method according to claim 5 or 6] claim 1:

- (i) An undercoating composition containing said components (a) and (e), wherein (e) is a polymer containing a silyl group having a silicon atom bound to a hydrolytic group and/or a hydroxyl group:
- (ii) An undercoating composition containing said components (a) and (e), and (f), wherein (f) is colloidal silica and/or colloidal alumina;
- (iii) An undercoating composition containing said components (a) and (e), and (g), wherein (g) is colloidal cerium oxide and/or colloidal zinc oxide; and
- (iv) An undercoating composition containing said components (a), (e), (f) and (g).

9. (Amended) A coating film having a dry coating layer comprising any one of the following undercoating compositions (i) to (iv) [specified in claim 8], and having thereon a dry coating layer comprising the coating composition according to [any one of claims 1 to 4, or the coating composition obtained by the method according to claim 5 or 6] claim 1:

- (i) An undercoating composition containing said components (a) and (e), wherein (e) is a polymer containing a silyl group having a silicon atom bound to a hydrolytic group and/or a hydroxyl group:
- (ii) An undercoating composition containing said components (a) and (e), and (f), wherein (f) is colloidal silica and/or colloidal alumina;

(iii) An undercoating composition containing said components (a) and (e), and (g),
wherein (g) is colloidal cerium oxide and/or colloidal zinc oxide; and
(iv) An undercoating composition containing said components (a), (e), (f) and
(g).--

--10.-28. (New)--